



Proprietary stormwater treatment devices
50% and 80% solids (TSS) removal



- 1. The City of Murfreesboro’s current policy with respect to approvals of manufactured treatment systems is to make use of the New Jersey DEP approvals and Metro Nashville approvals. See our Stormwater Controls Manual, Section 2.2.25, for more information.
- 2. The following tables were prepared as a quick reference for staff (Murfreesboro). The tables are intended to be a complete, accurate and up-to-date list, but since the approvals are tied to approvals made by [NJDEP](#) and Nashville’s [MWS](#), the tables here may miss recent information. Refer to the City’s Stormwater Controls Manual, Section 2.2.25 Proprietary Structural Controls, for the method we used to develop this list.
- 3. The first table is for gravity/hydrodynamic separators recognized at a 50% treatment level. The second table shows devices that achieve an 80% treatment level.
- 4. If you are a representative of a manufacturer and see errors in these tables, please let us know.

Model and Manufacturer	Model	CFS	Solids removal	Notes	Expiration of approval
Aqua-Swirl Concentrator Aqua-Shield, Inc. http://www.aquashieldinc.com/	AS-2	0.45	50%	See NJDEP web page for more information. Aqua-Swirl Maintenance	Dec. 1, 2016
	AS-3	0.9			
	AS-4	1.45			
	AS-5	1.8			
	AS-6	2.6			
	AS-7	3.55			
	AS-8	4.6			
	AS-9	5.85			
	AS-10	7.2			
	AS-12	10.4			
	AS-13	12.2			
	AS-XX	> 12.2			
Continuous Deflective Separator (CDS) Unit CONTECH Engineered Solutions	CDS-4	0.7	50%	See NJDEP web page for more information. CDS Maintenance Guide	--
	CDS-5	1.1			
	CDS-6	1.6			
	CDS-8	2.8			
	CDS-10	4.4			
	CDS-12	6.3			
Vortechs System CONTECH Engineered Solutions	1000	0.63	50%	See NJDEP web page for more information. Vortechs Maintenance Guide	Dec. 1, 2016
	2000	1.12			
	3000	1.75			
	4000	2.50			
	5000	3.40			
	7000	4.50			
	9000	5.70			
	11000	7.00			
	16000	10.10			
StormPro Environment 21, LLC	V48	1.29	50%	See NJDEP web page for more information. StormPro system maintenance	--
	V510	2.02			
	V612	2.91			
	V816	5.17			
	V1020	8.08			
Downstream Defender Hydro International	4-FT	1.12	50%	See NJDEP web page for more information. Maintenance Manual Maintenance Video	--
	6-FT	2.52			
	8-FT	4.48			
	10-FT	7.00			
	12-FT	10.08			
First Defense HC Hydro International	4 ft	1.5	50%	See NJDEP web page for more information. Operation and Maintenance Manual	--
	6 ft	3.38			
	8 ft	6.00			
Dual Vortex Separator by OldCastle Stormwater Solutions	DVS-36	0.56	50%	See NJDEP web page for more information. Inspection and Maintenance Guide	--
	DVS-48	1.00			
	DVS-606	1.56			
	DVS-72	2.25			
	DVS-84	3.06			
	DVS-96	4.00			
	DVS-120	6.25			
	DVS-144	9.00			

Model and Manufacturer	Model	CFS	Solids removal	Notes	Expiration of approval
AquaFilter Stormwater Filtration System by AquaShield, Inc.	AS-2.X	0.45	80%	See NJDEP web page for more information. System includes an Aqua Swirl Concentrator as pre-treatment, followed by filtration chambers based on inflow rate of 21.1 gpm/ ft² and a maximum drainage area of 0.033 acres/ft². Aqua-Filter Maintenance	Dec. 1, 2016
	AS-3.X	0.9			
	AS-4.X	1.45			
	AS-5.X	1.8			
	AS-6.X	2.6			
	AS-7.X	3.55			
	AS-8.X	4.6			
	AS-9.X	5.85			
	AS-10.X	7.2			
	AS-12.X	8.7			
	AS-13.X	12.2			
Filtrerra Bioretention System CONTECH Engineered Solutions	4x4	0.052	80%	Maximum drainage areas apply. (Flow values established based on New Jersey water quality rainfall event.) See NJDEP web page for more information. Filtrerra Operations and Maintenance	--
	4x6 or 6x4	0.078			
	4x8 or 8x4	0.104			
	6x6	0.117			
	6x8 or 4x12	0.156			
	6x10 or 10x6	0.194			
	6x12 or 12x6	0.233			
	7x13 or 13x7	0.295			
Media Filtration Systems CONTECH Engineered Solutions	Cartridge filters placed in array.	20 gpm / cartridge	80%	See NJDEP web page for more information. Media Filtration Maintenance	Dec. 1, 2016
Stormwater Management StormFilter CONTECH Eng. Solutions	Cartridge filters placed in array.	15 gpm/ cartridge	80%	StormFilter Inspection and Maintenance	Dec. 1, 2016
Up-Flo Filter Hydro International	Modules housed in catch-basin structure.	25 gpm/ module	80%	See NJDEP web page for more information.	Dec. 1, 2016
Jellyfish Filter Imbrium Systems	Drain-down cartridges	0.74 gpm/cartridge	80%	Maximum drainage areas apply. See NJDEP web page for more information. Jellyfish Filter Owner’s Manual	Dec. 1, 2016
	Hi-Flow cartridges	1.48 gpm/cartridge			
StormVault Jenson Precast	V48	1.29	80%	Underground detention and sediment treatment chambers	Dec. 1, 2016
	V510	2.02			
	V612	2.91			
	V816	5.17			
	V1020	8.08			
<i>KriStar Perk Filter</i> http://www.kristar.com/	Peak inflow at 1.5 gpm/sqft		80%	PerkFilter Inspection and Maint. Guide	Jan. 1, 2017 for review (MWSD)
	Cartridge ht.	Flow limit			
	12 in	6.8 gpm			
	18 in	10.2 gpm			
	24 in	13.6 gpm			
	30 in	17 gpm			
MWS-Linear Modular Wetland Modular Wetland System	Peak inflow at 1gpm/sqft of wetland cell surface area; pre-filters at 2.1 gpm/cartridge SA		80%	http://www.modularwetlands.com/ http://www.modularwetlands.com/maintenance/	July 10, 2016